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ABSTRACT

A study assessed vocational agricultural programs throughout Texas as they were perceived by the female students enrolled in them. During the study, researchers administered questionnaires to a randomly selected sample of 735 female students from 64 schools representing the 10 geographic areas of Texas. The students were asked to respond to questions pertaining to factors affecting female enrollment, curriculum-related areas, school factors, student-oriented areas, and employment opportunities. While the most prominent factor adversely affecting student enrollment was lack of acceptance by male vocational students, the following factors also had an adverse effect on the female students: inadequate opportunities for females to develop shop and livestock handling skills, inadequate information on career opportunities, and inadequate illustration of males and females performing the same agricultural tasks. In addition, the respondents felt that vocational agriculture teachers do not have high enough expectations of female students enrolled in vocational agriculture and indicated that administrators fail to encourage the enrollment of female students in vocational agricultural courses. It also appeared that females feel that they are less capable of performing agricultural tasks. (MN)

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AN ASSESSMENT OF VOCATIONAL AGRICULTURE PROGRAMS AS PERCEIVED BY FEMALE STUDENTS

June 30, 1982

FINAL REPORT

for research performed in cooperation with the Research Coordinating Unit, Department of Occupational Education and Technology, Texas Education Agency, Austin, Texas

PROJECT DIRECTOR: M. J. Cepica
Texas Tech University

PROJECT CO-DIRECTOR: Thomas A. Quarles
Stephen F. Austin State University

PROJECT STAFF: Donna Baker
Stephen F. Austin State University
Rodney Purswell
Texas Tech University
Cheryl KH. Smith
Texas Tech University

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TABLE OF CONTENTS

LIST OF TABLES . . . . . .

Chapter

I. INTRODUCTION 1

Legislative Impacts on Vocational Agriculture. i
Equal Access to Vocational Programs. 2
Statement of Problem 3
Purpose and Objectives 4
Definition of Terms. 5

II. REVIEW OF LITERATURE 6

A Need for Sex Equity in the Vocational Program. 6
Vocational Education as a Medium for Achieving Sex Equity 8
Sex Equity and Vocational Agriculture. 10

III. METHODS AND PROCEDURES 12

Population and Sample. 12
Data Gathering Instrument. 13
Data Analysis Techniques 13

IV. SPECIFIC RESULTS PRODUCED. 15

Delineations of the Demographic Data 15
Descriptive Analysis of the Data 18
Open Response Analysis 19
Curriculum Factors 22
School Factors 25
Student Factors. 28
Employment Opportunity Factors 30
Analysis of Demographic Variables. 32

V. POTENTIAL UTILIZATION OF RESULTS 33

Conclusions. 33
Recommendations. 35

SELECTED BIBLIOGRAPHY. 38

APPENDICES 40

A. Cover Letters. 41
B. Randomly Selected Schools Participating in the Study 45
C. Advisory Committee 47
D. Questionnaire. 49
E. Rank Order of Factors Affecting Other Female Students. 55
F. Significant Differences of Demographic Variables . . 57

LIST OF TABLES

Table		Page
1.	Students' Open Responses Regarding Factors Affecting Female Enrollment	21
2.	Female Vocational Agriculture Students' Perceptions of Curriculum Related Areas Affecting Female Students Enrolled in Vocational Agriculture.	23
3.	Female Vocational Agriculture Students' Perceptions of Selected School Factors Affecting Female Students Enrolled in Vocational Agriculture.	26
4.	Female Vocational Agriculture Students' Perceptions of Selected Student Oriented Areas Affecting Female Students Enrolled in Vocational Agriculture	29
5.	Female Vocational Agriculture Students' Perceptions of Employment Opportunities	31

CHAPTER I

INTRODUCTION

Legislative Impacts on Vocational Agriculture

Members of the United States Congress, recognizing a need for vocational education in certain occupational areas, passed the Smith-Hughes Act of 1917. This act authorized federal funds and provided guidelines to individual states for the establishment of vocational education programs in agriculture and trades and industry which included home economics. A framework for the method of instruction and qualifications of teachers, teacher educators, and students was incorporated in the act. Persons at least 14 years of age and less than college grade level were provided the opportunity to obtain entry level skills needed for career occupations, which included preparation for careers in production agriculture.

Expansion of the vocational education programs and changing needs of agriculture, trades and industry, and home economics prompted passage of legislation to supplement and improve the Smith-Hughes Act. Thus, the George-Reed Act of 1929 and the George-Dean Act of 1936 allowed additional funding for agriculture, home economics, and trades and industry education. In 1946 passage of the George-Barden Act permitted funds to be used for training out-of-school youth and for developing the Future Farmers of America (FFA) organizations. The FFA became an important voluntary intracurricular phase for students of the vocational agriculture program. Students who have participated in FFA have profited educationally from leadership programs and organizational activities. These programs and

activities have supplemented their agricultural training.

The expansion of the vocational agriculture program continued with the passage of the Vocational Act of 1963. Funds and guidelines were established for two programs. One program, called Cooperative Part-Time Training in Texas, permitted students to become employed in their vocational field on a part-time basis and receive a vocational education. A second program permitted students to acquire specialized vocational training and experience in some agricultural fields. In Texas this program was called Pre-Employment Laboratory Training. Students had to be at least 16 years of age to participate in these programs.

The legislature further expanded the vocational education program with passage of the Vocational Education Amendments of 1968. Several programs which evolved from these amendments have existed in Texas vocational agriculture. Two programs within vocational agriculture were Coordinated Vocational Academic Education (CVAE) and Vocational Education for the Handicapped (VEH). Coordinated Vocational Academic Education was developed to provide occupational training for students who had not succeeded in standard educational programs because of academic or socioeconomic difficulties. The Vocational Education for the Handicapped was developed to meet the needs of those students with mental or physical handicaps.

Equal Access to Vocational Programs

In recent years, federal laws and court rulings have been used to set precedents for a change of attitudes in education toward sex discrimination and sex stereotyping. With passage of the Vocational Amendments of 1976, legislators charged vocational educators with the responsibility of eliminating sex discrimination, sex stereotyping, and sex bias within their programs. The amendment's objectives were to provide a program free of sex discrimination and to furnish equal vocational education opportunities

to both male and female students. Persons within the vocational agriculture program were responsible for implementing changes regarding sex stereotyping and sex discrimination. In achieving this mandated change, female enrollment in the program was encouraged because enrollments had been dominated by male students.

Change has been characteristic of vocational education programs since their inception. Legislative impacts and changing labor environments have necessitated changes within the vocational program to better serve students. Various acts and amendments have been used to provide the vocational education programs with workable new programs and federal monies to implement these programs.

Statement of Problem

During recent years, economic factors and changing attitudes by society toward females in the work force have influenced females to seek employment outside of the home. Economic factors, including inflation and recession, have instigated needs for females to work outside of the home to supplement family income. A need for employment has been created with the increasing number of females who have become heads of households by choice, by divorce, or by death of a spouse. An increasing number of these females have moved into careers that have been male dominated because of the existence of higher wages. Females have moved into agriculturally oriented careers which require certain job related skills necessary to obtain and maintain employment. A need to prepare male and female students who are seeking employment in fields dominated by the opposite sex has become relatively new. The Vocational Education Amendments of 1976 required vocational educators to develop and conduct a program void of sex stereotyping and sex discrimination, so equal educational opportunities would be available to persons of both sexes. This law required

implementation of programmatic priorities for vocational education which included elimination of sex discrimination, sex stereotyping, and sex bias and encouraged participation of males and females in nontraditional vocational education programs. To fully realize maximum educational potential and enrollment of female vocational agriculture students, the application of the programmatic priorities stated by the Vocational Amendments of 1976 was necessary. For vocational agriculture programs to be most effective in preparing female students for careers in agriculture, agricultural educators have needed to realize how female students perceived the program in Texas. The focal point of this study was the female vocational agriculture students' perceptions of the vocational agriculture program in Texas.

Purpose and Objectives

The purpose of this study was to determine female vocational agriculture students' perceptions of the Texas vocational agriculture program.

Objectives set forth to be used as a guide for determining female vocational agriculture students' perceptions were as follows:

1. To determine female students' perceptions of the problems perceived in vocational agriculture programs.
2. To identify problems perceived to be curriculum oriented.
3. To identify problems perceived to be student oriented.
4. To identify problems perceived to be school oriented.
5. To determine significant differences of problems perceived among female students of different ethnic groups.
6. To determine significant differences of problems perceived among female students enrolled in production agriculture, pre-employment laboratory training, and cooperative part-time training.

7. To determine significant differences of problems perceived among female students in different geographic areas of the state.

Definition of Terms

Equal access - the same freedom and ability to utilize vocational education programs (11).

Regular vocational agriculture program - the production agriculture, cooperative part-time training, and pre-employment laboratory training programs of Texas that provide training or instruction for gainful employment in agriculturally oriented careers.

Sex bias - behaviors resulting from the assumption that one sex is superior to the other (14).

Sex discrimination - any action which limits or denies a person opportunities, privileges, roles, or rewards on the basis of their sex (14).

Sex equity - freedom from favoritism based on sex (9).

Sex stereotyping - attributing behaviors, abilities, interests, values, or roles to a person or a group of persons on the basis of their sex (14).

CHAPTER II

REVIEW OF LITERATURE

A Need for Sex Equity in the Vocational Program

The entrance of male or female students into vocational programs or occupations that have traditionally consisted of the opposite sex has presented unique sex equity problems. Research regarding sex equity, sex bias, and sex discrimination in vocational agriculture has been very limited; however, some research has been conducted regarding these areas in the total vocational education program.

Beyea and O'Kane (2) noted that sex equity, sex stereotyping, and sex bias have been problems in vocational education. According to the authors, vocational education has provided a framework in which sex role stereotyping has caused inequalities to exist. A need has existed to alleviate sex bias and sex stereotyping to better facilitate female training and employment in traditional male occupations.

Changing economic and social patterns have become important factors in the recruitment of females into nontraditional occupations. Stiegler (11) in a study of strategies for achieving sex equity identified agriculture as a nontraditional occupation. The National Education Association (12) noted that one-half of all women between 18 and 64 years of age hold jobs in the nation's work force. This association further suggested that pressing economic needs were instrumental in causing nearly one-half of the 31 million female workers to enter the work force. Smith and Farris (9) acknowledged that only two of five available jobs in the

nation offered enough income for one person to financially support a family. From 1970 to 1976 there was a 33 percent increase in the number of families of which the female was totally responsible for the financial well-being of the family. It was asserted in Today's Changing Roles (12) that of every 10 young women, nine would be employed for 25 or more years.

Industry has encouraged females to move into nontraditional occupation roles. Stiegler (11) suggested that equal opportunity employment laws could be used to create a need for females trained in nontraditional occupations so industry could meet labor supply needs on the basis of these laws. Today's Changing Roles (12) noted that in 1970 there were 31.5 million women in the labor force. It was acknowledged that if all of the females stayed at home and if unemployed men were placed in jobs held by women, a total of 29.3 million jobs would be unfilled.

Changing economic and social patterns have brought about legislation concerning sex discrimination and sex bias practices in both industry and education. Smith and Farris (9) stated that the education amendments of the 1970's were enacted because of economic and social needs of women to seek employment outside the home.

Federal legislation presented another major need for sex equity in the vocational education program. In Title IX of the Educational Amendments of 1972, legislators placed requirements on any educational endeavor that received federal monies to cease excluding persons on the basis of sex from participation in those programs. Following the Education Amendments of 1972, the Vocational Amendments of 1976 mandated sex equity in the vocational programs. Beyea and O'Kane (2) acknowledged that the Vocational Amendments of 1976 provided educational legislation addressing females' needs for the first time in educational history.

The impact of education legislation concerning sex equity was observed

at the national and state level. On the national level, Beyea and O'Kane (2) noted the Vocational Amendments of 1976 required an investigation by the Commissioner of Education which determined the extent that sex discrimination and stereotyping existed in vocational education programs assisted by federal monies. The law placed mandates at the state level which abated sex discrimination and stereotyping in vocational education programs.

Federal legislation provided a strong impetus for the recruitment of females to enroll in nontraditional occupational training courses of the vocational programs. For vocational education to comply with the law and receive federal assistance, sex equitable education was required in vocational education programs.

A further need for achieving sex equity in vocational education programs has been personal growth and development. As suggested by Smith and Farris (9), sex equity opportunities have facilitated expanded personal development and enhanced occupational development. Vetter, Burkhardt, and Sechler (14) noted that sex stereotyping has caused damage to human productivity and fulfillment by denying males and females access to occupations in which they could have been productive. Sex stereotyping has impeded this personal development and personal expansion.

Vocational Education as a Medium for Achieving Sex Equity

Changes in laws, economics, and society have created significant progress in the achievement of sex equity in vocational education programs; however, sex equity problems in vocational education have persisted beyond compliance with the law. It was noted by Matthews and McCune (6) that paper compliance with laws was not enough to bring about necessary changes to achieve sex equity. Vetter, Burkhardt, and Sechler (14)

suggested sex biases need not be obvious to have exhibited a damaging force on achievement of sex equity. These authors indicated that more subtle forms of sex stereotyping, such as biased attitudes of students or other persons, have often limited opportunity and growth of students.

Achievement of sex equity depended on a medium which rescinded attitudes and practices of sex bias and sex stereotyping. This medium has been vocational education. C. B. Stiegler (11) identified education as a leader in increasing awareness of sex bias, sex stereotyping, and in providing knowledge and skills for the promotion of sex equity. As Stiegler noted, a correlation existed between equal participation in the job market and equal educational opportunities. Bromfield and Kilmurray (1) noted that one of the greatest challenges which faced vocational education was expanded career options for underserved student populations. Vocational education, including vocational agriculture, has been challenged to serve female students effectively.

To address the question of sex equity, vocational educators have looked at specific targets for improvement. The primary targets have been awareness of sex bias and attitudes of personnel inside and outside of the vocational education system. Houser and Garvey (5) noted that attitudes and awareness of career choice began at a young age and later in life career choices were based upon stereotypes. In a study by Handley and Walker (3) regarding females seeking traditional male dominated occupation training areas, it was found that "important others" wielded the most influence on these females' decisions. The authors indicated these "important others" were parents, teachers, administrators, and friends. Veres (13) acknowledged that these same people contributed to stereotyping career choices. Houser and Garvey (5) found encouragement from persons close to female students was the most significant factor which

improved recruitment of females into nontraditional roles. These persons needed to be educated in order to foster sex equity.

Another barrier which prevented sex equity laid in the females' attitudes toward nontraditional enrollment. Snell (10), in a study involving females in New Jersey shop classes, indicated that females' reluctance to enter nontraditional shop courses stemmed more from fear and resentment of the males enrolled than from fear of mastery of the skills. Handley and Walker (3) indicated one reason nontraditional enrollments have lagged was the females' attitudes toward nontraditional programs.

Vocational education has become a medium through which sex equity problems have been addressed. Obvious and blatant forms of sex discrimination and sex bias have largely been eliminated due to the passage of federal legislation. The more subtle forms of sex bias and sex stereotyping have continued to be a barrier in achieving sex equity. These subtle forms of sex bias and sex stereotyping were identified by Vetter, Burkhardt, and Sechler (14) as concepts which indicated men were better than women, self-concepts developed by a history of sex stereotyping, stereotypic expectations, and students' attitudes of what proper male and female behavior should be. Smith and Farris (9) maintained the achievement of sex equity by addressing sex stereotypic attitudes and sex bias awareness in the vocational education program has become a role of vocational education personnel and persons associated with the program.

Sex Equity and Vocational Agriculture

Vocational agriculture has been one segment of the vocational program that traditionally has had concentrated male enrollments. This tradition along with the ideas that agriculture was a male occupation has indicated that the program has been bound by sex stereotyping. Beyea and O'Kane (2) noted that 94.6 percent of the national vocational agriculture enrollment

was male and 5.4 percent was female in 1972. By 1977 the male enrollment was 92 percent and the female enrollment constituted 8 percent of the total enrollment.

In contrast Wright (15) reported Texas had a 9.8 percent female enrollment that had increased to 12.2 percent of the total secondary vocational agriculture program.

Federal legislation has mandated sex equity in the vocational agriculture program. As Henderson (4) noted, these laws have been cause for increased female enrollments in vocational agriculture. Henderson suggested that the aim of sex equity should be on subtle aspects of sex bias and sex stereotyping to increase enrollments and better serve female vocational agriculture students.

Changing economic and social patterns and federal legislation have required vocational agriculture educators to address the problem of sex equity. Henderson (4) disclosed that one of the goals of sex equity should be to expose students to a variety of career options requiring a range of interests and abilities. This goal has necessitated that sex stereotyping and sex bias be eliminated from the vocational agriculture program.

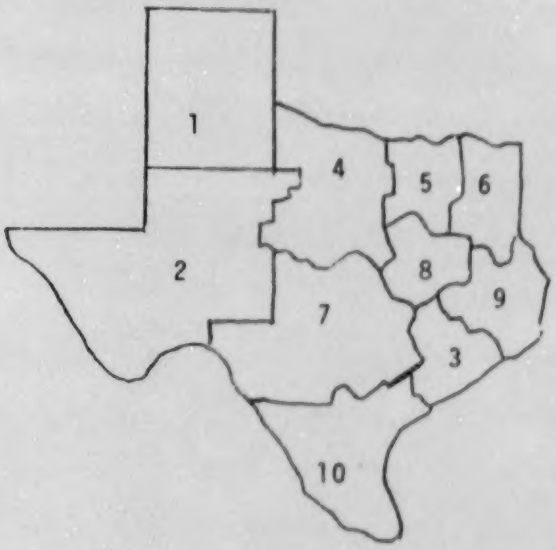
As shown in the review of literature, sex bias, sex stereotyping, and sex discrimination have been barriers to females entering nontraditional occupations. Also revealed were the changing attitudes toward female employment and the economic needs for females to obtain employment in nontraditional areas. For vocational agriculture students to realize the value of their education, barriers existing within the program must be addressed. The reduction of these barriers will make the vocational agriculture education experience more meaningful to both male and female students.

CHAPTER III

METHODS AND PROCEDURES

Population and Sample

The population examined in this study included all schools within the 10 geographical areas of Texas (Figure 1) in which female students were enrolled in regular vocational agriculture programs.



The research sample was obtained from female students enrolled in regular vocational agriculture programs in Texas. The area consultant of each of the 10 geographical areas submitted a list of 25 schools in which female vocational agriculture students were enrolled. A letter (see Appendix A), requesting participation in the study, was mailed to teachers in each of the 250 vocational agriculture departments. A form was included with the letter to obtain relevant information pertaining to the number of female students enrolled. Of the vocational agriculture teachers written, 165 responded, which yielded a 73.3 percent return and a potential

sample of 2,516 female students.

The 165 schools were then stratified by area and 70 schools were randomly selected by drawing seven schools from each area. Of the 70 schools (see Appendix B) selected, students from 64 departments completed questionnaires, yielding a 91.4 percent return. A sample of 735 female vocational agriculture students was included in the data analysis.

Data Gathering Instrument

A questionnaire, consisting of restricted and nonrestricted responses, was developed to obtain demographic and quantifiable data. Questions for the instrument were developed so that information gathered would provide data relevant to meeting the objectives of this research.

After development of the initial questionnaire, an advisory committee (see Appendix C) consisting of 10 vocational agriculture teachers, three teacher educators, and two Texas Education Agency personnel was selected to review the questionnaire. The questionnaire was reviewed by the selected vocational agriculture teachers and a field test was made utilizing five students from each teacher's department.

The results of the review by the advisory committee and field testing by female students were assessed and revisions were made to enhance the quality of the instrument. The questionnaire was submitted to the Research Coordinating Unit of the Texas Education Agency for approval. A copy of the final questionnaire can be reviewed in Appendix D.

Questionnaires were coded according to the schools included in the random sample. A cover letter (see Appendix A) containing the purpose of the project and pertinent instructions was included in the mailing.

Data Analysis Techniques

The data were entered by remote computer terminal and analyzed using the Statistical Analysis (SAS) version 79.5. Descriptive statistical

analysis included the determination of mean values, standard deviations, standard errors, frequencies, and percentages. One-way analysis of variance was used to determine significant differences of perceived problems between demographic data which included grade level, ethnic origin, career expectations, area, school size, and year(s) of enrollment. Duncan's Multiple Range test was used to rank order significant differences among the mean values of the demographic data. The level of significance applied to the research data was 0.05.

CHAPTER IV

SPECIFIC RESULTS PRODUCED

Delineations of the Demographic Data

The sample population of this study was female vocational agriculture students from 70 randomly selected schools in Texas. These students were enrolled in regular production agriculture classes, pre-employment laboratory, and cooperative part-time training. The questionnaire was designed to obtain demographic data in six classifications for use in the data analysis. Students were asked to indicate their grade level, year of vocational agriculture enrollment, ethnic origin, and career plans. The school size classifications were determined through school enrollment figures provided by the vocational agriculture teacher.

The data were analyzed according to the vocational agriculture classes in which students were enrolled. Enrollment delineation of the sample size indicated approximately one-half of the sample students were enrolled in Vocational Agriculture I. Students enrolled in Vocational Agriculture II classes comprised about one-fourth of the sample population, while Vocational Agriculture III and IV, Pre-Employment Laboratory, and Cooperative Part-Time Training enrollments represented one-fourth of the sample. Specific delineations are as follows:

Enrollment Classes	Number	Percent
Vocational Agriculture I	361	49.1
Vocational Agriculture II	179	24.4
Vocational Agriculture III	103	14.0
Vocational Agriculture IV	27	3.7
Cooperative Part-Time Training	28	3.8
Pre-Employment Laboratory	37	5.0
TOTALS	735	100.0

A second analysis factor was the grade level of the students. The grade levels considered were ninth, tenth, eleventh, and twelfth grade, as follows:

Grade Level	Number	Percent
9	204	27.8
10	226	30.7
11	164	22.3
12	141	19.2
TOTALS	735	100.0

The sample population was distributed evenly among the grade levels with the tenth graders accounting for the largest percentage, 30.7 percent.

Acquisition of data concerning the ethnic backgrounds of the sample population was necessary to analyze the data. Students indicated their ethnicity by identifying one of seven classifications. These classifications included American Indian, Alaskan Native, Asian or Pacific Islander, Black Non-Hispanic, Hispanic, and White Non-Hispanic. The White Non-Hispanic students comprised the largest percentage of the sample population. Forty-three of the students had Hispanic origins (5.9 percent) and three students were Black Non-Hispanic (0.4 percent). Three of the students (0.4 percent) indicated they were of racial backgrounds other than the ones listed. The sample analysis of racial backgrounds is as follows:

Ethnic Origin	Number	Percent
Black Non-Hispanic	3	0.4
Hispanic	43	5.9
White Non-Hispanic	686	93.3
Other	3	0.4
TOTALS	735	100.0

Students disclosed their future career choices. They revealed whether their future plans were agriculturally oriented, non-agriculturally oriented, or undecided. As indicated below, 58.0 percent of the students were undecided, while 32.4 percent planned agriculturally oriented careers and

9.6 percent planned careers in fields other than agriculture.

Career Plans	Number	Percent
Agriculturally Oriented	238	32.4
Non-agriculturally Oriented	71	9.6
Undecided	426	58.0
TOTALS	735	100.0

Information analysis by geographical areas of the state was provided by the students. Areas 10, 3, and 7 represented approximately one-half of the sample population. It should be noted that Areas 3 and 7 contained two large metropolitan populations while Area 10 had several metropolitan areas. The distribution of the student sample is as follows:

Area	Number	Percent
1	43	5.9
2	60	8.1
3	120	16.3
4	46	6.3
5	48	6.5
6	44	6.0
7	118	16.1
8	62	8.4
9	71	9.7
10	123	16.7
TOTALS	735	100.0

To provide information on the school enrollment, vocational agriculture instructors completed a form indicating their school size. In Texas five classifications existed according to the student enrollment in grades nine through twelve. These classifications are 5A, 4A, 3A, 2A, and 1A with 5A schools having the largest enrollment and 1A schools having the smallest enrollment of students. The 5A schools, representing metropolitan areas, comprised the largest percentage of the sample population. Sample analysis by school size is as follows:

School Size	Student Enrollment	Number	Percent
1A	(0-134)	29	3.9
2A	(134-264)	99	13.5
3A	(265-614)	189	25.7
4A	(615-1309)	106	14.5
5A	(1310 and above)	312	42.5
TOTALS		735	100.0

An open ended response was included in the demographic portion of the questionnaire, asking the female students to indicate reasons they chose to enroll in vocational agriculture. These reasons, by rank order and percent of sample indicating each reason are as follows:

Reason for Enrollment	Percent
1. They wanted to learn about animals.	46.3
2. They were interested in learning about agriculture.	31.4
3. They wanted to prepare for a future career.	8.9
4. They were encouraged by others to enroll.	2.9
5. They wanted to learn shop skills.	2.0
6. They wanted to learn responsibility and leadership.	1.1
7. Other reasons less than one percent each.	7.4

Descriptive Analysis of the Data

The questionnaire (see Appendix D) was designed to determine vocational agriculture female students' perceptions of factors affecting female students enrollment in the program. Students indicated their perceptions by responding to selected statements divided into four areas of the vocational agriculture program. These areas were: curriculum areas, school areas, student areas, and employment opportunity areas. The student sample responded to each of the selected statements by indicating the degree to which they agreed or disagreed with the statement. The responses were arranged in a Likert (7) scale format, in which the student could respond to five degrees of influence. These degrees of influence were assigned numerical values and real limits were determined for use in analyzing the values obtained. Shown below are the degree of

influence categories, their assigned values, and the real limits for each category:

Degree of Influence	Assigned Value	Real Limits
Strongly Agree	1	1.00-1.49
Slightly Agree	2	1.50-2.49
Neutral	3	2.50-3.49
Slightly Disagree	4	3.50-4.49
Strongly Disagree	5	4.50-5.00

A sixth category, undecided, was used as a response and given no assigned value so that it would not be included in the statistical analysis of the data except for frequency counts. However, it was noted that the response category undecided allowed for different sample totals used in calculating the mean value of a selected statement. The SAS program package used to analyze the data by computer treated the no-value given the undecided response as a missing value and only frequency counts were obtained for this category.

Mean values, frequencies of response categories, and standard deviations of the sample were obtained for each of the selected statements. These mean values, frequency of response categories, and standard deviations were used to rank order the selected statements, which indicated factors affecting female students enrollment, according to the student sample response. Frequencies were also obtained for each of the degrees of influence according to the total sample of student responses.

Open Response Analysis

The questionnaire included an open response question to which students indicated perceived problems regarding their enrollment in vocational agriculture. Another open response from the students indicated problems they observed other female students experience in vocational agriculture. These responses were ranked by the students in descending order from one to three. A numerical value was placed on the responses in order to math-

ematically weigh the factors in reporting cumulative responses. The mathematical calculation involved the following values:

Rank of Factors	Numerical Values
Most important	3
More important	2
Important	1

The open response factors that the student sample noted affected them most adversely may be observed in Table 1. The female vocational agriculture students are not accepted by the male vocational agriculture students. This factor was ranked number one with a weighted value of 388. Some female students noted male students perceived female students less capable of performing agriculture skills. This was the second ranked factor with a weighted value of 178. It was noted that female vocational agriculture students perceived that they are less capable of performing agriculture skills with a numerical value of 114 as the third ranked problem. One problem perceived by the students was inadequate restroon facilities for female students which ranked fourth. The fifth and sixth ranked problems perceived by some female vocational agriculture students were, not being accepted by vocational teachers and instructors not having high enough expectations of female students. The female students perceived inadequate opportunities to develop shop skills as the seventh ranked problem.

The eighth, ninth, and tenth ranked problems perceived by the female students were non-acceptance by female students who are not enrolled in vocational agriculture, inadequate opportunities to participate in and develop livestock handling skills, and inadequate opportunities to participate in FFA affairs, respectively.

Students indicated what they perceived as the most important problems for other females enrolled in vocational agriculture. Using the same

TABLE 1

STUDENTS' OPEN RESPONSES REGARDING FACTORS AFFECTING FEMALE ENROLLMENT

Factors	Weighted Value	Rank
Female vocational agriculture students are not accepted by male vocational agriculture students (i.e. being teased, irritated).	369	1
Male vocational agriculture students perceive female vocational agriculture students as less capable of performing agriculture skills.	178	2
Female vocational agriculture students perceive they are less capable of performing agriculture skills.	114	3
Restroom facilities are inadequate for female vocational agriculture students.	97	4
Female vocational agriculture students are not accepted by vocational agriculture teachers.	72	5
The vocational agriculture instructor does not have high expectations of female students.	56	6
Female vocational agriculture students are not given adequate opportunities to participate in and develop shop skills.	51	7
Female vocational agriculture students are not given adequate employment opportunities.	34	8
Female vocational agriculture students are not accepted by nonvocational agriculture female students.	34	9
Female vocational agriculture students are not given adequate opportunities to participate in and develop livestock handling skills.	18	10
Female vocational agriculture students are not given adequate opportunities to participate in FFA affairs.	17	11

tabulation procedures, the results of the rank orders were essentially the same as those for the first open response question (see Appendix E).

Curriculum Factors

The students responded to 14 selected statements, regarding curriculum aspects of the program. These aspects included the curriculum materials, curriculum content, and curriculum activities of the program. The rank order and frequency of degrees of influence for the total sample student response is shown in Table 2.

The number one ranked statement was, "illustration of female students performing agriculture tasks in curriculum materials," with a mean value of 2.11. Ranked second was "curriculum materials contain word phrases pertaining to female students." The statement, "curriculum materials contain information on career opportunities for female students," was ranked third by the student sample.

Although the mean values for the aforementioned statements were within the real limits for slightly agree (1.50-2.49) it may be noted that the number of students indicating a slightly disagree or strongly disagree response was somewhat large. For example an examination of the response statement, "curriculum materials illustrate female students performing agricultural tasks," revealed a mean value of 2.13 which indicated that the students slightly agreed with the statement. However, 90 students (12.24 percent) slightly disagreed or strongly disagreed with the statement indicating some students perceived this factor might adversely affect some female students enrolled in vocational agriculture.

The fourth and fifth ranked factors by mean value affecting female student enrollment were adequate opportunities for females to obtain shop skills and livestock handling skills. The mean values indicated the students slightly agreed with the factor that adequate opportunities

TABLE 2

FEMALE VOCATIONAL AGRICULTURE STUDENTS' PERCEPTIONS OF CURRICULUM RELATED AREAS AFFECTING FEMALE STUDENTS ENROLLED IN VOCATIONAL AGRICULTURE

Selected Curriculum Statements	Response Categories								
	Strongly Agree	Slightly Agree	Neutral	Slightly Disagree	Strongly Disagree	Undecided	Rank	Mean Value	Standard Deviation
Curriculum materials illustrate male and female students performing agriculture tasks.	257	179	137	64	26	72	1	2.13	1.15
Curriculum materials contain word phrases pertaining to female students.	311	162	143	56	20	43	2	2.01	1.11
Curriculum materials provide information on career opportunities for females.	334	199	97	69	13	23	3	1.92	1.07
There are adequate opportunities for females to participate in shop skills development.	430	96	64	34	56	55	4	1.81	1.28
There are adequate opportunities for females to participate in livestock handling skills.	475	99	66	39	27	29	5	1.65	1.10
Instructor provides SOEP visits to male and female students.	491	87	66	15	9	67	6	1.45	.86
Information taught in vocational agriculture is useful for male and female students.	590	86	34	13	4	8	7	1.29	.68
Adequate opportunities exist for female students to have commerical livestock and crop projects.	573	76	46	4	3	33	8	1.27	.64

TABLE 2 (Continued)

Selected Curriculum Statements	Response Categories								
	Strongly Agree	Slightly Agree	Neutral	Slightly Disagree	Strongly Disagree	Undecided	Rank	Mean Value	Standard Deviation
Adequate opportunities exist for female students to obtain FFA awards.	636	54	21	7	5	12	9	1.19	.59
Adequate opportunities exist for female students to obtain FFA offices.	648	44	26	8	3	6	10	1.18	.58
Adequate opportunities exist for female students to participate in leadership contests.	650	43	19	6	7	10	11	1.17	.60
Adequate opportunities exist for female students to participate on judging teams.	624	46	29	6	0	30	12	1.16	.53
Adequate opportunities exist for female students to participate in FFA activities.	677	31	18	3	1	5	13	1.11	.43
Adequate opportunities exist for female students to show livestock.	674	30	14	1	1	15	14	1.09	.38

existed to develop shop skills. It was also noted that 12.24 percent of the sample slightly disagreed or strongly disagreed with this statement.

A mean value of 1.45 (strongly agreed) for the statement, "instructors provide Supervised Occupational Experience Program visits to male and female students," made this the sixth ranked factor. "Information taught in vocational agriculture is useful for male and female students" was the seventh ranked factor affecting the female students.

Mean values for factors eight through ten, which ranged from 1.27 to 1.17, indicated the students strongly agreed they had adequate opportunities to have commercial livestock projects, obtain FFA awards, and FFA offices. The eleventh through fourteenth ranked factors in order of mean values were adequate opportunities existed to participate in leadership contests, judging teams, FFA activities, and female students had adequate opportunities to show livestock.

School Factors

Statements within the questionnaire were developed to identify some adverse factors affecting female enrollment that might be associated with school areas of the program. The students' responses can be examined by reviewing Table 3.

The student sample disclosed the highest mean value (2.22) for the statement, "administration encourages enrollment of males and females in vocational agriculture programs." It was noted that 68 students slightly disagreed with the statement and 68 students strongly disagreed with the statement.

A second factor affecting female enrollment identified as "non-vocational agriculture teachers feel vocational agriculture is an acceptable program for females," had a mean value of 2.15. Seventy-two of the students indicated that they slightly disagreed with the statement and

TABLE 3

FEMALE VOCATIONAL AGRICULTURE STUDENTS' PERCEPTIONS OF SELECTED SCHOOL FACTORS AFFECTING FEMALE STUDENTS ENROLLED IN VOCATIONAL AGRICULTURE

Selected School Statements	Response Categories								
	Strongly Agree	Slightly Agree	Neutral	Slightly Disagree	Strongly Disagree	Undecided	Rank	Mean Value	Standard Deviation
Administration encourages enrollment of females in vocational agriculture programs.	310	126	124	68	68	39	1	2.22	1.36
Nonvocational agriculture teachers feel vocational agriculture is an acceptable program for females.	285	154	109	72	44	71	2	2.15	1.27
Male and female students are adequately disciplined by the vocational agriculture teacher.	386	115	96	56	48	34	3	1.95	1.27
Vocational agriculture teachers use female acknowledgements, (i.e. pronouns, adjectives, greetings).	487	105	70	29	21	23	4	1.58	1.02
Vocational agriculture teachers have the same expectations of male and female students.	493	112	62	32	22	14	5	1.58	1.02
Counseling about agriculture career opportunities is available to male and female students.	521	105	58	23	6	21	6	1.44	.84
Agriculture instructors encourage male and female students' classroom participation.	578	82	37	14	17	7	7	1.37	.85
Agriculture instructors are able to teach agricultural subjects with females in the classroom.	565	80	44	15	8	23	8	1.34	.78

TABLE 3 (Continued)

Selected School Statements	Response Categories								
	Strongly Agree	Slightly Agree	Neutral	Slightly Disagree	Strongly Disagree	Undecided	Rank	Mean Value	Standard Deviation
Counseling about vocational agriculture classes is made available to male and female students.	594	74	34	9	6	18	9	1.27	.68
Agriculture classes are available for female students.	663	34	19	5	6	8	10	1.15	.58

44 students indicated that they strongly disagreed with the statement.

Adequate discipline by the teacher, female acknowledgements by the teacher, and equal expectations by the teacher were the third, fourth, and fifth ranked factors affecting the female students with mean values of 1.95, 1.58, and 1.58, respectively. Mean values of 1.44 and 1.37 revealed counseling of career opportunities to female students and instructors' encouragement of classroom participation as the sixth and seventh ranked school factors affecting female students. Factors ranked eight through ten were instructor's ability to teach all agricultural subjects with females in the classroom, counseling about vocational agriculture's availability to female students, and availability of agriculture classes to female students. Mean values for statements representing factors eight through ten were in the strongly agreed category, indicating very little adverse affect on the students.

Student Factors

The third area which identified factors affecting female students enrolled in vocational agriculture was the student area. Six statements regarding student factors affecting female students enrollment in vocational agriculture were selected. These statements allowed the sample students to measure the effects of students' attitudes toward the vocational agriculture programs that might affect the female students enrolled as shown in Table 4.

The statement, "nonvocational agriculture students perceive vocational agriculture as a program for females," ranked first with a mean value of 2.50. One hundred seventy-one students slightly disagreed or strongly disagreed with this statement, indicating the factor affected the respondents more adversely than other student factors did.

"Vocational agriculture teachers encourage enrollment of female

TABLE 4

FEMALE VOCATIONAL AGRICULTURE STUDENTS' PERCEPTIONS OF SELECTED STUDENT ORIENTED AREAS AFFECTING FEMALE STUDENTS ENROLLED IN VOCATIONAL AGRICULTURE

Selected student oriented statements	Response Categories								
	Strongly Agree	Slightly Agree	Neutral	Slightly Disagree	Strongly Disagree	Undecided	Rank	Mean Value	Standard Deviation
Female nonvocational agriculture students perceive vocational agriculture as a program for females.	190	176	117	111	60	81	1	2.50	1.31
Vocational agriculture teachers encourage enrollment of female students in vocational agriculture.	485	109	68	26	26	21	2	1.60	1.04
Families support females enrolling in vocational agriculture.	539	90	42	27	27	10	3	1.50	1.02
Female students are accepted by male vocational agriculture students.	529	97	46	22	26	15	4	1.50	1.00
Vocational agriculture female students perceive vocational agriculture as a program designed for females.	541	106	41	16	16	15	5	1.42	.87
Female students accept electing an FFA sweetheart.	569	72	50	5	8	31	6	1.31	.73

students in vocational agriculture" was the second ranked statement with a mean value of 1.60. Fifty-two students slightly or strongly disagreed with the statement. The third and fourth ranked factors were "families support females enrolling in vocational agriculture" and "female students are accepted by male vocational agriculture students." Both factors had mean values of 1.50; however, factor three, "family support of female students enrolling in vocational agriculture," had a standard deviation of 1.01. The fifth ranked mean values indicated students strongly agreed that the vocational agriculture female students perceived vocational agriculture as a program designed for females. Also the students strongly agreed (1.31 mean value) that they accepted electing an FFA sweetheart.

Employment Opportunity Factors

The fourth area in which the respondents identified factors affecting female students enrolled in vocational agriculture was the area of female employment opportunities in agricultural occupations. These statements were selected to measure female vocational agriculture students' perceptions of their employer, community, and information about employment opportunities. Students responded to the statements by selecting the degree of influence in which they agreed or disagreed with the statement as shown in Table 5.

The first ranked perceived factor affecting the enrolled female students in this area was "there is adequate information of agriculturally related occupations in the community." This factor had a mean value of 1.90 with 52 of the students slightly disagreeing and 22 of the students strongly disagreeing with the statement. The students ranked the statement "agricultural employers accept female students" second with a mean value of 1.88 and a standard deviation of 1.02. The third ranked factor "the community accepts female students in agricultural related occupations"

TABLE 5

FEMALE VOCATIONAL AGRICULTURE STUDENTS' PERCEPTIONS
OF EMPLOYMENT OPPORTUNITIES

Summary of Selected Statements	Response Categories								
	Strongly Agree	Slightly Agree	Neutral	Slightly Disagree	Strongly Disagree	Undecided	Rank	Mean Value	Standard Deviation
Male and female students are informed of agriculturally related occupations in the community.	334	150	100	52	22	77	1	1.90	1.13
Agricultural employers accept female students.	309	159	130	31	14	92	2	1.88	1.03
The community accepts female students in agricultural related occupations.	362	168	93	33	11	68	3	1.75	.98

had a mean value of 1.75. It was noted that mean values for all three factors were within the real limits for the slightly agree category.

Analysis of Demographic Variables

Demographic variables were analyzed to determine if there were significant differences between demographic data and selected factor statements. Each factor statement was modeled as the dependent variable using the various demographic variables as independent variables in computing F values for Analysis of Variance. F values were used in order to determine whether significant differences existed between means within the categories of the demographic data. The Duncan's multiple range test was used to identify the rank order of the means that were significantly different. The significant differences between the means identified by the Duncan's multiple range test were used only when the Analysis of Variance F value indicated significance.

An Analysis of Variance test was performed on each statement using categories of year enrollments, grade level, career plans, ethnic origin, geographical areas, and school size as independent variables.

The Analysis of Variance test disclosed several significant differences within the demographic data; however, it was determined that these differences obtained did not contribute to the major finding enclosed within the text of this study. It must be noted that these differences may have indicated areas in which more research is needed. These differences can be reviewed in Appendix F.

CHAPTER V

POTENTIAL UTILIZATION OF RESULTS

Conclusions

Many factors may affect female students enrolled in vocational agriculture in Texas. The analysis of the data gathered indicated some positive factors or strengths of the program. Conversely, female vocational agriculture students assessed some factors of the program as having slightly adverse effects on them. The primary objectives of this research problem were to identify factors of the regular vocational agriculture program that might present problems for female vocational agriculture students in curriculum, school, student, and occupationally oriented areas.

Likert scale responses from students did not indicate factors having a prominent adverse effect on them. All mean values ranged in the strongly agree to slightly agree category, except for one factor having a mean value of 2.50 (neutral), indicating overall positive attitudes toward the program. The factors identified in this chapter as adversely affecting female students were determined from a combination of the mean values, the frequencies of the statements receiving slightly or strongly agree responses, and an evaluation of the open response portion of the instrument.

It was concluded that the most prominent factor adversely affecting female enrollment was lack of acceptance by male vocational agriculture students.

An analysis of the factors in the curriculum area of the selected statements and open responses indicated five factors that affects the

female students adversely. These factors were as follows:

1. There are inadequate opportunities to develop shop skills for female students.
2. There are inadequate opportunities for female students to develop livestock handling skills.
3. There is inadequate information on career opportunities for female students in curriculum materials.
4. There is inadequate illustration of male and female students performing agriculture tasks in curriculum materials.
5. There are inadequate word phrases (i.e. pronouns, adjectives) pertaining to female students in curriculum materials.

These factors need to be addressed in the opinion of this researcher.

In the assessment of school area, it was concluded that factors having the most adverse effect on female students enrolled in vocational agriculture were as follows:

1. There are inadequate restroom facilities in the vocational agriculture building.
2. Nonvocational agriculture teachers do not perceive vocational agriculture is an acceptable program for females.
3. Vocational agriculture teachers do not have high enough expectations of female students in vocational agriculture.
4. There is a lack of administration encouragement for enrollment of female students in vocational agriculture.
5. Vocational agriculture instructors perceive female students are less capable of performing vocational agriculture skills and jobs.

Female vocational agriculture students assessed four factors in the student area that had a more negative effect on them. These were as

follows:

1. Female vocational agriculture students are not accepted by male vocational agriculture students.
2. Male vocational agriculture students perceive female vocational agriculture students as less capable of performing agriculture skills and jobs.
3. Nonvocational agriculture students do not perceive vocational agriculture as a program for females.
4. Female students perceive that they are less capable of performing agriculture skills.

One factor had an adverse effect on female vocational agriculture students in the area of employment opportunity. This factor was as follows:

1. There is inadequate information of agriculturally oriented jobs in the community for female students.

Recommendations

After reviewing the findings of this research study the following recommendations were formulated:

1. Attitudes need to be developed among the male vocational agriculture students that female students can be a very productive part of the program. The instructor should instill an attitude of respect among all students. Some group or individual counseling may be needed. All students should demonstrate interest and be encouraged to perform at their highest levels.
2. All students should have adequate opportunities to develop shop skills and livestock handling skills within their abilities. Teachers should insure that students understand it is in their interest to develop these abilities and skills. Though some of

the jobs will not be pleasant, planning and informing the students of the day the job is to be done can enhance the skills participation. Proper planning of time so all students can participate will enhance the development of skills.

3. Commercially developed curriculum materials should include both male and female representation in pictures and in the text. Illustrations of males and females performing agriculture tasks or in agriculture occupations can make the program more visible for both sexes. The instructor can also make use of dual representation when developing teaching materials.
4. The administration, counselors, vocational administrators, principals, and superintendents should encourage enrollment of male and female students in vocational agriculture.
5. Vocational agriculture instructors need to have higher expectations of performances from all students. To achieve this, the instructor needs to recognize the capabilities of the male and female students and provide them with challenging work so these capabilities can be developed.
6. Make all students as visible as possible in the program and promote their achievements so that other vocational agriculture teachers and vocational agriculture students will realize there is a place for males and females in the program.
7. When designing a shop, include restrooms for female students. If the building is already established and there are inadequate restroom facilities, construction of facilities or remodeling of existing facilities should be considered by the instructor and school administration.
8. All students need to recognize their capabilities and develop

them to help gain confidence in themselves within the program. The instructor needs to provide an attitude of confidence for male and female students to perform so they themselves will not feel less capable of performing these skills. This can be provided by individual or group instruction and positive comments and constructive criticism.

9. It is necessary to inform male and female students of agriculturally related occupations within the community and agriculture industry. This can be achieved by providing a unit at all grade levels on agriculture careers for males and females. Informing the students at all grade levels of agriculture occupations can help students with agriculture career aspirations plan for the future. It may also help students realize there are agriculture occupations early in the program so they will remain active in vocational agriculture.

SELECTED BIBLIOGRAPHY

1. Bromfield, Sandra; Kilmurray, James A. Strategies and Resources for Promoting Equity in Vocational Education. Massachusetts State Department of Education, Boston, Massachusetts, ED 19835, 1980.

2. Beyea, Patricia; O'Kane, Geraldine. How to Erase Sex Discrimination in Vocational Education. 22 East 40th Street, New York, New York: Women's Rights Project American Civil Liberties Union Foundation, 1977.

3. Handley, Herbert M.; Walker, Ronald D. Factors Discriminating Between Females Electing Traditional and Non Traditional Programs of Vocational Study in High School. ED 200756, April, 1981.

4. Henderson, Jan. "Sex Equity: Are You Limiting Student Career Expectations." Agricultural Education. vol. 50, no. 7, (March, 1981), p. 13.

5. Houser, Betsy Bosak; Garvey, Chris. Factors Affecting Non Traditional Vocational Enrollments. Steiger, Fink, and Kisecoff, Inc., Santa Barbara, California, EP 20079, April, 1981.

6. Matthews, Martha and McCune, Shirley. Implementing Title IX and Attaining Sex Equity: A Workshop Package for Elementary-Secondary Educators. Office of Education, Department of Health, Education, and Welfare, Washington DC., September, 1978.

7. Murphy, Gardner; Likert, Rensis. Public Opinion and the Individual. New York, New York: McGraw Hill, 1966.

8. Phipps, Lloyd J. Handbook on Agriculture Education in Public Schools. Danville, Illinois: The Interstate Printers and Publishers, Inc., 1980.

9. Smith, Amanda J. and Farris, Charlotte J. Pioneering Programs in Sex Equity: A Teacher's Guide. The American Vocational Association Inc., Arlington, Virginia. 1980.

10. Snell, Margaret. "Trying Out Male Roles for Size." American Vocational Journal, vol. 52, no. 5, (May 1977), p. 5960.

11. Stiegler, Dr. C. B. How To . . . Strategies For Sex Equity: Project No. G58 88001 3F. Northern Kentucky University, Highland Heights, Kentucky, Spring, 1980.

12. Today's Changing Roles: An Approach to Non-Sexist Teaching. The National Foundation for the Improvement of Education, Washington DC., 1974.

13. Veres, Helen C.; and others. Sex Equity: Factors Associated With Non Traditional Vocational Enrollments. Cornell University, Ithacca, N.Y., Institute for Research and Development in Occupational Education. ED 200776, April, 1981.

14. Vetter, Louise; Burkhardt, Carolyn and Sechler, Judith. Sex Equity Strategies. Research and Development Series No. 144. The National Center for Research in Vocational Education, The Ohio State University, Columbus, Ohio. 1980.

15. Wright, Cecil, Y. "Equality In Vocational Education." Texas Occupational News, vol. 4, no. 4, (Summer, 1980), p.3.

APPENDICES

APPENDIX A

COVER LETTERS

Texas Tech University

Department of Agricultural Education P.O. Box 4169 Lubbock, Texas 79409 Phone (806) 742-2816

October 22, 1981

Dear Vocational Agriculture Teacher(s),

Recently the Texas Education Agency funded a project entitled "An Assessment of Vocational Agriculture Programs as Perceived by Female Students." This needed research is to be cooperatively conducted by Texas Tech University and Stephen F. Austin University.

The purpose of this project is to identify problems the female vocational agriculture student might encounter through participating in a vocational agriculture program. These problems could be curriculum, student or school oriented. The results of this project have implications toward curricula improvement, improving student relationships, improving teaching skills, and providing guidelines to help reduce the stereotyping of female students in vocational agriculture.

Female students enrolled in vocational agriculture from each of the ten areas of Texas will need to complete questionnaires in order to gather approoriate information. Your area supervisor has recommended we contact you regarding this matter. You will need to administer a developed questionnaire to your female vocational agriculture students sometime during late November or early December of this year. The questionnaire will be mailed to your department and will require approximately 20 minutes of classroom time to complete.

We need your help in carrying out this project. If you can assist us in this study, please fill out and return the form at the bottom of this page. Enclosed is a self-addressed envelop for your convenience.

Sincerely,

G. G. Scroggins, Director
Agricultural Education
Texas Education Agency
Austin, TX

M. J. Cepica
Associate Professor
Agricultural Education
Texas Tech University

Tom Quarles, Head &
Assistant Professor
Agricultural Education
Stephen F. Austin State University

Name of School _____

Name of Instructor _____

_____ Size of School (A, 2A, 3A, etc.)

_____ Number of female students in vocational agriculture

_____ Total number of vocational agriculture students

ckhs

enclosure

Texas Tech University

Department of Agricultural Education P.O. Box 4169 Lubbock, Texas 79409 Phone (806) 742-2816

A project entitled "An Assessment of Vocational Agriculture Programs as Perceived by Female Students" has been recently funded by the Research Coordinating Unit of the Texas Education Agency. This project is being co-directed by M. J. Cepica, Texas Tech University and Tom Quarles, Stephen F. Austin University. As a part of this study, we are developing a questionnaire which will be administered to a random stratified sample of female students enrolled in vocational agriculture classes in Texas schools. The end product of this research effort will be a "teacher's guide" which will be made available to teachers of vocational agriculture.

We are inviting you to be a part of this project. A fifteen person advisory committee consisting of ten vocational agriculture teachers, three teacher educators, and two Texas Education Agency representatives will be utilized to revise and/or validate the survey instrument. Would you please review the enclosed questionnaire. If you have suggestions for improvement, they will be welcomed. A self-addressed, stamped envelope is enclosed for your convenience in returning the questionnaire with your comments.

We are quite aware that each work day seems to bring new demands on our time. Please be assured that your contribution is greatly appreciated.

Sincerely,

M. J. Cepica
Agricultural Education
Texas Tech University

Tom Quarles
Agricultural Education
Stephen F. Austin University

ckhs

Enclosure

Texas Tech University

Department of Agricultural Education P.O. Box 4169 Lubbock, Texas 79409 Phone (806) 742-2816

November 15, 1981

To the Vocational Agriculture Teacher Addressed,

You informed us that your vocational agriculture department is interested in helping conduct a project concerning attitudes of female vocational agriculture students. The following are a few simple directions we would like for you to consider when administering the questionnaire.

Enclosed you will find questionnaires for your female students. The questionnaires should take approximately 20 minutes of classroom time for the students to complete. You may administer the questionnaires to your female vocational agriculture students as you wish, however, we would suggest that you ask them to answer the questions to the best of their ability and to consider the question carefully before providing an answer. Please note for the student, when circling numbers as requested, (See questionnaire), the neutral means the student's opinion is between slightly disagree and slightly agree. If a student does not have proper information or insight on a question, the appropriate response to circle would be "U" (undecided.) Also, we would like for you to emphasize that the information will be kept confidential and we hope you can provide ample time for the students to answer.

After you have administered the questionnaires return them as quickly as possible, preferably the same day they are completed.

The cooperating universities and the Texas Education Agency would like to thank you for your time and helpfulness in this research effort. Thanks for your participation.

Sincerely,

G. G. Scroggins,
Director Texas Education Agency
Agricultural Education
Austin, TX

M. J. Cepica,
Associate Professor
Agricultural Education
Texas Tech University

Tom Quarles,
Assistant Professor
Agricultural Education
Stephen F. Austin State University

ckhs

Enclosures

APPENDIX B

RANDOMLY SELECTED SCHOOLS PARTICIPATING

IN THE STUDY

RANDOMLY SELECTED SCHOOLS PARTICIPATING IN THE STUDY

AREA I

Vega
Idalou
Monterey
New Deal
Lockney
Plainview
Higgins

AREA II

Alpine
Irion County
San Angelo Central
Schleicher County
Midland High
Lamesa
Fort Hancock

AREA III

Rice Consolidated
Rockdale
Cypress Creek
Klein High School
Westfield
La Porte
Schulenburg

AREA IV

Abilene High
Wylie
DeLeon
Stephenville
Albany
Quanah
Wichita Falls-Rider

AREA V

Boyd
Weatherford
Springtown
Duncanville
Bridgeport
Lancaster
Keller

AREA VI

Carthage
Linden-Kildare
DeKalb
Elysian Fields
Kilgore
Robert E. Lee (Tyler)
Liberty-Eylau

AREA VII

East Central
Smithville
Lanier
Comal-Canyon
San Marcos
Blanco
Medina Valley

AREA VIII

Mexia
Cross Roads
Burleson
Brownsboro
Palestine
Midway
Penelope

AREA IX

Barbers Hill
Woodville
New Waverly
Kennard
Grapeland
Diboll
Warren

AREA X

Banquete
Mary Carroll
Calhoun
Cuero
Pleasanton
Mission
La Feria

APPENDIX C

ADVISORY COMMITTEE

ADVISORY COMMITTEE

Mr. G. G. Scroggins
Texas Education Agency

Dr. Cecil Wright
Texas Education Agency

Dr. Lewis Eggenberger
Texas Tech University

Dr. Herb Schumann
Sam Houston State University

Dr. Johnny Johnson
Tarleton State University

Mr. Kent Ohnheiser
Vocational Agriculture Teacher
Schulenburg, Texas

Mr. Jerry Bearden
Vocational Agriculture Teacher
Mason, Texas

Mr. Tommy Blessing
Vocational Agriculture Teacher
Boyd, Texas

Mr. George Brooks
Vocational Agriculture Teacher
Fort Hancock, Texas

Mr. James F. Dollery
Vocational Agriculture Teacher
La Feria, Texas

Mr. Oran Eggar
Vocational Agriculture Teacher
Tuscola, Texas

Mr. Kyle Leftwich
Vocational Agriculture Teacher
Carthage, Texas

Mr. Ellis Miller
Vocational Agriculture Teacher
Miami, Texas

Mr. Larry Poe
Vocational Agriculture Teacher
Nacogdoches, Texas

Mr. A. D. Wheat
Vocational Agriculture Teacher
Cleburne, Texas

APPENDIX D
QUESTIONNAIRE

OPINIONS OF FEMALE STUDENTS

REGARDING VOCATIONAL AGRICULTURE

GENERAL INFORMATION: We are especially interested in YOUR opinions as a student in vocational agriculture. Knowing what your interests and needs are, as well as what problems you may have in vocational agriculture classes, will be very helpful to teachers who plan future programs that better meet the interests and needs of female students.

DIRECTIONS: Please answer the following questions by placing an X in each blank as it applies to you or complete a written answer when required.

1. Vocational agriculture courses I am currently enrolled in or have taken in the past are:

_____Vo Ag I
_____Vo Ag II
_____Vo Ag III
_____Vo Ag IV
_____Co-op Ag
_____Pre-Lab (Please specify)
_____

2. My present grade level is:

_____ 8
_____ 9
_____10
_____11
_____12

3. My race/ethnic origin is:

_____American Indian
_____Alaskan Native, Asian or Pacific Islander
_____Black, not Hispanic
_____Hispanic (Mexican-American)
_____Other (Please specify)
_____

4. My future career plans are:

_____agriculturally oriented
_____non-agriculturally oriented
_____undecided

5. I chose to enroll in vocational agriculture because _____
_____
_____
_____

DIRECTIONS: Following are groups of questions for you to read carefully and answer as each question applies to your situation. These questions provide you an opportunity to express your opinions regarding various phases of the vocational agriculture program. Please read the questions carefully and circle the number that corresponds with your opinion concerning each statement. If you are undecided about the question, circle the "U" at the right of the response line.

THE FOLLOWING GROUP OF QUESTIONS CONCERNS CURRICULUM ORIENTED ASPECTS OF THE VOCATIONAL AGRICULTURE PROGRAM.	Strongly Agree	Slightly Agree	Neutral	Slightly Disagree	Strongly Disagree	Undecided
1. Information taught in vocational agriculture classes is useful for female and male students.	1	2	3	4	5	U
2. Vocational agriculture curriculum materials contain phrases referring to males and females.	1	2	3	4	5	U
3. Vocational agriculture curriculum materials provide information on career opportunities for both male and female students.	1	2	3	4	5	U
4. Vocational agriculture curriculum materials illustrate female and male students performing agriculture tasks.	1	2	3	4	5	U
5. I am given an opportunity to participate in shop skills development, (example: using tools and equipment in welding, mechanics, carpentry, etc.).	1	2	3	4	5	U
6. I am given an opportunity to participate in livestock handling skills, (example: dehorning, castration, vaccination, etc.).	1	2	3	4	5	U
7. I am given an opportunity to participate in FFA activities, (example: membership, banquets, social gatherings, meetings, etc.)	1	2	3	4	5	U
8. I am given an opportunity to obtain FFA offices.	1	2	3	4	5	U
9. I am given an opportunity to participate in FFA leadership contests.	1	2	3	4	5	U
10. I am given an opportunity to obtain FFA awards.	1	2	3	4	5	U

		Strongly Agree	Slightly Agree	Neutral	Slightly Agree	Strongly Agree	Undecided
11.	I am given an opportunity to participate on FFA judging teams.	1	2	3	4	5	U
12.	I am given an opportunity to show livestock.	1	2	3	4	5	U
13.	I am given an opportunity to carry out commerical livestock and crop projects.	1	2	3	4	5	U
14.	Supervised Occupational Experience Program visits by the instructor are made to female and male students.	1	2	3	4	5	U

THE FOLLOWING GROUP OF QUESTIONS CONCERNS THE SCHOOL ORIENTED ASPECTS OF THE VOCATIONAL AGRICULTURE PROGRAM.

1.	Vocational agriculture classes are available for male and female students.	1	2	3	4	5	U
2.	Counseling about vocational agriculture classes is availabe to male and female students.	1	2	3	4	5	U
3.	Counseling about career opportunities in agriculture is available to male and female students.	1	2	3	4	5	U
4.	The administration (example: principal, superintendent, counselor) encourages enrollment of males and females in vocational agriculture programs.	1	2	3	4	5	U
5.	Vocational agriculture instructors encourage male and female students' classroom participation, (example: questions, ideas, opinions, comments, etc.)	1	2	3	4	5	U
6.	The vocational agriculture instructor has the same expectations of male and female vocational agriculture students.	1	2	3	4	5	U
7.	The vocational agriculture teacher uses male and female acknowledgements, (example: greetings, pronouns, adjectives, etc.)	1	2	3	4	5	U

	Strongly Agree	Slightly Agree	Neutral	Slightly Disagree	Strongly Disagree	Undecided
	1	2	3	4	5	U
8. Male and female students are adequately disciplined by the vocational agriculture teacher.	1	2	3	4	5	U
9. The vocational agriculture teacher is able to teach all agriculturally related subjects, (example: animal reproduction, animal anatomy, etc.) with females and males in the classroom.	1	2	3	4	5	U
10. Teachers, (other than vocational agriculture teachers), feel that vocational agriculture is an acceptable program for females.	1	2	3	4	5	U

THE FOLLOWING GROUP OF QUESTIONS CONCERNS STUDENT ATTITUDES TOWARD THE VOCATIONAL AGRICULTURE PROGRAM.

1. I perceive vocational agriculture as a program designed for male and female students.	1	2	3	4	5	U
2. Female students who are not enrolled in vocational agriculture perceive vocational agriculture as a program designed for male and female students.	1	2	3	4	5	U
3. My family was supportive of my choice to enroll in vocational agriculture.	1	2	3	4	5	U
4. Female and male students are encouraged to enroll in vocational agriculture classes by vocational agriculture teachers.	1	2	3	4	5	U
5. I am accepted by male vocational agriculture students in my class.	1	2	3	4	5	U
6. I feel that electing a FFA Sweetheart in our chapter is accepted by female FFA members.	1	2	3	4	5	U

THE FOLLOWING GROUP OF QUESTIONS PERTAINS TO AGRICULTURAL EMPLOYMENT.

1. Female students in agricultural related jobs are accepted by the community.	1	2	3	4	5	U
2. Female students are accepted by agricultural employers.	1	2	3	4	5	U
3. Male and female students are informed of agricultural related job opportunities in the community.	1	2	3	4	5	U

Please list the three most important problems (if any) you face as a female vocational agriculture student. (Please list the most important problem first and least important last.)

1. _____
2. _____
3. _____

Please list the three most important problems you feel other female students of vocational agriculture face. (Please list the most important problem first and least important last.)

1. _____
2. _____
3. _____

APPENDIX E

RANK ORDER OF FACTORS AFFECTING OTHER FEMALE STUDENTS

RANK ORDER OF FACTORS AFFECTING OTHER FEMALE STUDENTS

	Factors	Numerical Value
1.	Females are not accepted in vocational agriculture by male vocational agriculture students.	164
2.	Males perceive female vocational agriculture students as less capable of performing agriculture skills.	57
3.	Female vocational agriculture students are given inadequate opportunities to develop shop skills.	44
4.	There are inadequate restroom facilities for female vocational agriculture students.	35
5.	Females are not accepted in vocational agriculture by nonvocational agriculture female students.	34
6.	Female vocational agriculture students perceive they are less capable than male vocational agriculture students of performing agriculture skills.	31
7.	Female vocational agriculture students are given inadequate opportunities to develop livestock handling skills.	29
8.	Vocational agriculture instructors do not have high expectations of female vocational agriculture students.	28

APPENDIX F

SIGNIFICANT DIFFERENCES OF DEMOGRAPHIC VARIABLES

SIGNIFICANT DIFFERENCES OF DEMOGRAPHIC VARIABLES

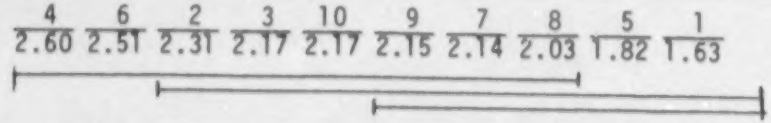
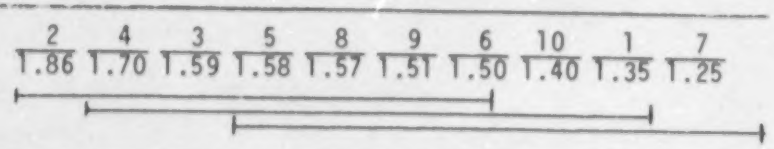
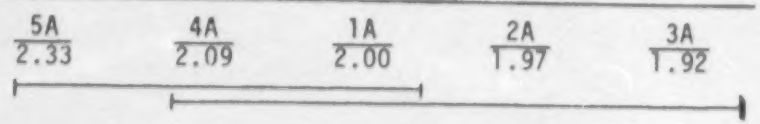
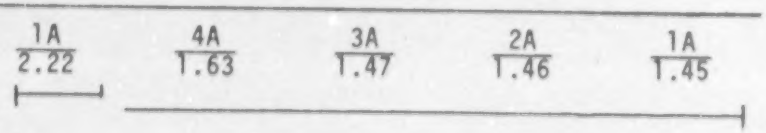
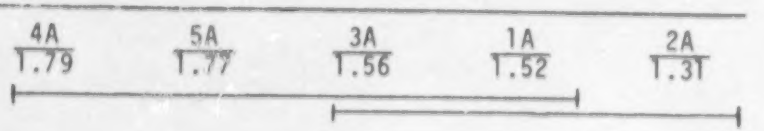
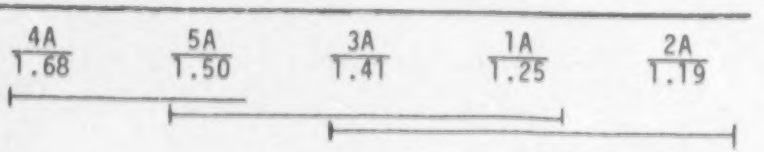
Selected Statements	F Value	Total Sample x value	Independent Variable Ranked x values
			Program Areas
Vocational agriculture classes are available for male and female students.	2.51	2.15	Prod Ag 3 (1.33) — Prod Ag 1 (1.13) — Prod Ag 2 (1.12) — Prod Ag 4 (1.11) — Pre-emp (1.11) — Co-op Ag (1.07)
Families support female's enrollment in vocational agriculture.	4.43	1.50	Co-op Ag (1.79) — Prod Ag 1 (1.65) — Prod Ag 3 (1.36) — Prod Ag 2 (1.36) — Prod Ag 4 (1.23) — Pre-emp (1.14)
			Program Groups
Curriculum materials provide information on career opportunities.	3.85	1.92	Co-op Ag (2.43) — Production Ag (1.90) — Pre-employment (1.72)
Families support female enrollment in vocational agriculture.	3.53	1.50	Co-op Ag (1.79) — Production Ag (1.51) — Pre-employment (1.14)
Females in agriculture occupations are accepted by the community.	3.25	1.75	Pre-employment (2.03) — Production Ag (1.75) — Co-op Ag (1.39)

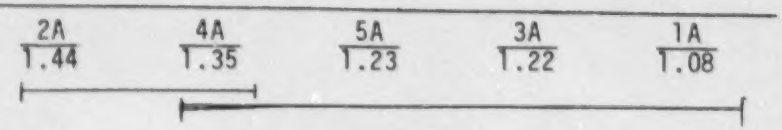
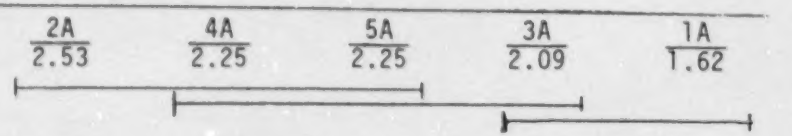
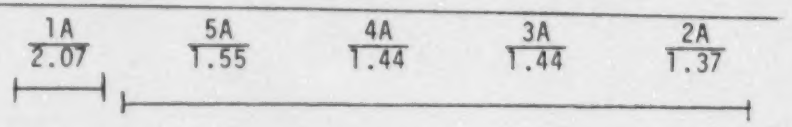
			Grade Level
Females are given adequate opportunity in shop skill development.	2.90	1.81	10 (1.91) — 11 (1.89) — 9 (1.87) — 12 (1.49)
Vocational agriculture program is designed for female students.	3.63	1.42	10 (1.60) — 12 (1.35) — 11 (1.34) — 9 (1.33)
Families support female's enrollment in vocational agriculture.	3.48	1.50	9 (1.63) — 11 (1.62) — 10 (1.45) — 12 (1.27)
			Ethnic Origin
Information taught in vo ag is useful for female students.	3.03	1.29	Other (2.00) — Anglo (1.29) — Hispanic (1.14) — Black (1.00)
Curriculum materials contain word phrases referring to females.	2.72	2.01	Other (3.67) — Hispanic (2.10) — Anglo (2.00) — Black (1.33)
Opportunity to participate on FFA judging teams.	4.03	1.17	Undecided (1.22) — Ag Oriented (1.11) — Non-ag Oriented (1.10)

			Career Plans		
Instructor encourages females' participation in the classroom.	4.86	1.37	Non-ag Oriented 1.50	Undecided 1.42	Ag Oriented 1.23
Instructor has the same expectations of female students.	4.93	1.58	Non-ag Oriented 1.80	Undecided 1.63	Ag Oriented 1.43
Instructor uses male and female acknowledgements.	3.19	1.58	Non-ag Oriented 1.78	Undecided 1.62	Ag Oriented 1.46
Instructor is able to teach anatomical subjects with female students in the classroom.	3.73	1.34	Non-ag Oriented 1.47	Undecided 1.39	Ag Oriented 1.24
Non-female vocational agriculture students perceive vocational agriculture as a program designed for females.	5.08	2.50	Ag Oriented 2.73	Non-ag Oriented 2.45	Undecided 2.38
Female students are informed of agriculture related job opportunities in the community.	4.36	1.91	Undecided 1.99	Non-ag Oriented 1.98	Ag Oriented 1.72

			Texas Education Agency Designated Areas
Information taught in vocational agriculture is useful for female students.	2.23	1.28	1 (1.64) 3 (1.38) 4 (1.37) 5 (1.35) 10 (1.25) 7 (1.23) 8 (1.22) 6 (1.20) 9 (1.18) 2 (1.17)
Females participate in shop skills development.	4.60	1.81	7 (2.30) 2 (2.11) 10 (1.92) 3 (1.75) 5 (1.69) 9 (1.68) 4 (1.63) 1 (1.58) 8 (1.34) 6 (1.25)
Females are given opportunities to carry out commerical livestock and crop projects.	2.54	1.27	3 (1.50) 4 (1.37) 5 (1.33) 2 (1.30) 1 (1.26) 10 (1.23) 9 (1.21) 7 (1.18) 8 (1.18) 6 (1.09)
Vocational agriculture classes are made available for female students.	2.38	1.15	7 (1.32) 6 (1.25) 1 (1.21) 3 (1.18) 9 (1.15) 4 (1.13) 8 (1.10) 10 (1.07) 5 (1.02) 2 (1.02)
Counseling of career opportunities in agriculture is available for female students.	2.37	1.44	3 (1.71) 5 (1.62) 7 (1.47) 9 (1.40) 8 (1.37) 10 (1.37) 4 (1.37) 2 (1.36) 6 (1.25) 1 (1.22)
The administration encourages enrollment of female students.	4.91	2.22	4 (3.29) 7 (2.31) 9 (2.30) 10 (2.27) 2 (2.20) 3 (2.14) 1 (2.05) 6 (1.90) 8 (1.89) 5 (1.80)

Instructor has equal expectations of female students.	3.05	1.58	6 3 7 2 8 4 10 9 5 1 1.86 1.82 1.82 1.55 1.47 1.43 1.43 1.41 1.40 1.30
Vocational agriculture is designed for female students.	2.50	1.42	6 3 2 8 7 9 10 5 4 1 1.95 1.49 1.47 1.44 1.38 1.35 1.33 1.30 1.28 1.28
I am accepted by male vocational agriculture students in the class.	3.46	1.50	5 6 4 3 7 9 2 1 10 8 1.93 1.82 1.78 1.64 1.44 1.44 1.36 1.35 1.31 1.25
Females in agricultural related jobs are accepted by the community.	2.68	1.75	9 4 5 6 3 10 7 1 2 8 2.03 2.00 2.00 1.84 1.74 1.73 1.70 1.68 1.50 1.39
Female students are accepted by agriculture employers.	2.67	1.88	9 1 4 5 10 7 3 6 2 8 2.26 2.08 2.00 2.00 1.94 1.87 1.82 1.74 1.67 1.50
Female students are informed of agricultural related job opportunities in the community.	2.41	1.90	4 6 9 5 7 1 3 10 2 8 2.19 2.18 2.09 2.00 2.00 1.93 1.85 1.83 1.78 1.40

Teachers feel vocational agriculture is an acceptable program for females.	2.20	2.15	
Families support female enrollment in vocational agriculture.	2.24	1.50	
			School Size
Curriculum materials illustrate female students performing agricultural tasks.	4.10	2.13	
Opportunity to participate in shop skills development.	14.19	1.81	
Opportunity to participate in livestock skills.	4.21	1.65	
SOEP visits are made by instructor.	4.46	1.45	

Counseling about vocational agriculture is available to male and female students.	2.79	1.27	
Administration encourages enrollment of female vocational agriculture students.	3.23	2.22	
Families support females enrolling in vocational agriculture.	3.01	1.50	
Nonvocational agriculture female students perceive vocational agriculture as a program designed for females.	2.87	2.50